

the substance of the thin outer coat, giving it a very peculiar appearance.

The shell on the newly hatched animal, which remains as a nucleus on the coat of the older shells, is smooth, uniformly convex, without any appearance of the anterior truncation or of the radiating ridges, which is so peculiar in the adult shells; and it seems also to have a straight lower edge without any appearance of the large ventral gape of the genus.

The cavity of the tube is contracted by an internal ring just above the hinder end of the shells, leaving an oblong central aperture of about half the diameter of the tube. This contraction is formed of several shelly plates with interspaces between them.

The animal has the power of repairing a fracture of the tube. There is a specimen in the Museum which had evidently been completely broken across about half its length, and the direction of the tube altered; the two portions have been united by an internal irregular white shelly coat.

#### EXPLANATION OF PLATE XXXIX.

Fig. 1. *Furcella gigantea*, half the natural length; *a, b, c, d, e*, the remains of former closing of the tube.

Fig. 2. *Furcella gigantea*, view of terminal closing of the tube; of the natural size.

Fig. 3. Palettes, showing the inner and outer sides.

Fig. 4. *Chæna annulata*, enlarged.

Fig. 5. *Chæna tessellata*, enlarged.

### 3. REVIEW OF THE SPECIES OF THE FISSIROSTRAL FAMILY MOMOTIDÆ. BY PHILIP LUTLEY SCLATER, M.A., F.Z.S. ETC.

(Aves, Pl. CXXVIII.)

Considerable additions have been made of late years to this rather peculiar family of birds, of which one member only was known to Linnæus; and there are now at least sixteen or seventeen different Motmots, of which examples occur in European collections. Two or three very interesting articles have been written upon the habits and certain structural peculiarities of these birds; but no modern writer except Lesson, in his little-known volume, entitled 'Description des Mammifères et Oiseaux' (where descriptions of eleven species known to the author are given), has attempted a complete review of the species. The following paper has been drawn up with a view to meet this deficiency, and to bring together in one place short characters sufficient for distinguishing these birds, so as to obviate the necessity of referring to all the different publications where the species were originally described.

Latham's term *Momotus*, being long precedent to Illiger's *Priornites*, which is sometimes employed for this group, has every claim for adoption. I therefore propose to call the group *Momotidæ* (as

I think they have quite sufficient distinctive characters to entitle them to rank as an independent family), and not *Prionitidæ*, as is done by some modern systematists.

The Motmots are a purely tropical American family, occupying an area nearly coequal with that of several other characteristic groups belonging to the same fauna. From Southern Mexico, where two species occur, they extend through Central America and some of the more southern Antilles over the whole of the eastern portion of South America as far southwards as south-eastern Brazil and Paraguay, where a single species is found. Their true focus seems to be Central America, where the greatest number of species and the most characteristic forms occur.

Concerning the spatulation of the two medial rectrices in some of these birds, which has occasioned so much discussion, I am not inclined to agree with Waterton, who thinks that it is performed by the bird with his own beak (see *Wanderings*, ed. 4, p. 114); nor with Schomburgk, who attributes it to the form of the nest (*Naumannia*, 1, pt. iv. p. 20); but I consider it a purely natural formation, which, like the denudation of the base of the bill in *Corvus frugilegus*, does not become complete except in the adult bird.

A similar formation occurs in certain groups of Humming-birds (*Spathura*, *Loddigesia*, &c.) and among the Parrots in the genus *Prioniturus*; but in these cases the feathers are, I believe, produced with the stem already denuded, and do not (as in *Momotus*) become spatulated by the falling away of the intermediate barb.

#### Familia MOMOTIDÆ.

*Rostrum longius quam caput, modice incurvum, plerumque compressum, apice paululum uncinata; mandibularum marginibus serratis; oris angulis vibrissis munitis: nares basales, apertura parva et rotundata: alæ breves, rotundatæ, remigibus quarta, quinta et sexta fere æqualibus et longissimis: cauda, e rectricibus decem aut duodecim, quarum duæ externæ abnormaliter breves, elongata valde graduata, rectricibus duobus mediis longissimis et harum apicibus plerumque spatulatis: tarsi breves, antea scutellati: pedes prehensorii, digito exteriori longo et cum mediali usque ad medium, interiore autem brevi et ad basin tantum cum medio conjuncto; posteriore hoc paulo brevior; unguibus incurvatis et compressis.*

#### Genus I. MOMOTUS.

*Momotus*, Lath. Ind. Orn. i. p. 110 (1790).

*Prionites*, Ill. Prodr. Syst. p. 224 (1811).

*Baryphonus*, Vieill. Analyse, p. 48 (1816).

*Rostrum elongatum, compressum; mandibulis fortiter serratis: cauda elongata.*

Div. a. *Caudæ rectricibus duodecim, harum duobus mediis spatulatis.*

## 1. MOMOTUS BRASILIENSIS.

*Momotus*, Briss. Orn. iv. p. 465.

*Ramphastos momota*, Linn. S. N. i. p. 152.

*Momotus brasiliensis*, Lath. Ind. Orn. p. 140; Gray, Gen. p. 68. sp. 1; List of Sp. in B.M. ii. 1. p. 39; Less. Descr. d. Mamm. et Ois. p. 264.

*Prionites momota*, Schomb. Guian. iii. 704; Bp. Consp. p. 165; Vol. Anisodact. p. 8; Hahn, Ausl. Vög. ii. pl. 3.

*Momotus momota*, Jard. & Selby, Ill. Orn. l. p. to pl. 23.

*Baryphonus cyanocephalus*, Vieill. N. D. d. H. N. xxi. 315.

*Prionites brasiliensis*, Tsch. F. P. p. 251 (?).

*Motmot du Brésil*, Buff. Pl. Enl. 370.

*Le Motmot*, Le Vaill. Ois. de Par. i. pl. 37, 38.

*Clare viridis subtus rufescente indutus: pileo medio et lateribus capitis cum macula pectorali nigris; pileo antice thalassino, postice cæruleo cincto: cervice postica læte castanea.*

Long. tota 17, alæ 5·75, caudæ 11·0; rostri a fronte 1·4, a rictu 1·95.

*Hab.* Cayenne, British Guiana (*Schomb. & Waterton*); Para (*Wallace*); Eastern Peru (*Tsch.*); R. Ucayali (*Hauuxwell*).

*Mus.* Brit., Paris., &c.

The specific term *brasiliensis* is rather an unfortunate one for this bird, which seems most frequent in collections from Cayenne and Guiana, though since, as Mr. Wallace has informed me, it is common at Para and all along the Lower Amazon, the name cannot be said to be altogether inaccurate. But in what is generally known to ornithologists as Brazil—about Bahia and Rio—the present bird does not occur, and is replaced by another member of the family.

This species seems to extend up the valley of the Amazon as far as the confines of Eastern Peru. Specimens from the Ucayali in Mr. Gould's collection are rather more brightly coloured, but present the same characteristic castaneous blotch on the nape as the Cayenne bird, and are not separable from this species.

## 2. MOMOTUS ÆQUATORIALIS.

*Momotus æquatorialis*, Gould, P. Z. S. *antea*, p. 223.

*Clare viridis, cervice postica et corpore subtus vix rufescente tinctis: pileo medio et lateribus capitis cum macula lata pectorali nigris: pileo undique cyaneo (his plumis cyaneis postice cæruleo præpilatis) et item nigro circumcincto.*

Long. tota 17·0, alæ 6·3, caudæ 8·0; rostri a fronte 1·7, a rictu 2·15.

*Hab.* Archidona in rep. Equatoriana.

*Mus.* Joh. Gould.

Mr. Gould has obligingly lent me the type of his description of this Motmot, which, as might be expected from the locality, appears to be different from any other described species. It approaches most nearly to *M. Lessoni*, which it resembles in the blue border of the

back of the crown being again edged with black. But it is still larger than that species, the bill being stronger, and the wings longer, the hue of the blue on the head is less thalassine, the green of the body below is purer, and the black blotch on the breast is particularly large. The single specimen sent is in not quite perfect plumage, that is to say, the tail is not yet spatulated; but there are indications of the commencement of this process. The exact locality in which the specimen was obtained is marked 'Archidona,' which is a small Indian village on the Rio Misagualli, above its confluence with the Napo in the Canton of Quixos.

### 3. MOMOTUS MICROSTEPHANUS, sp. nov.

*Momotus brasiliensis*, Sclater, P. Z. S. 1855, p. 135.

*Clare viridis, collo postico et corpore subtus rufescente tinctis; spatio verticali medio et lateribus capitis cum macula pectorali nigris: pileo antice thalassino, postice cæruleo late cincto.*

Long. tota 14·5, alæ 4·6, caudæ 9·0, rostri a fronte 1·2, a rictu 1·8.

*Hab.* Interior of New Grenada.

*Mus.* P. L. S.

In my list of Bogota birds I noticed the peculiarities of the *M. brasiliensis* coming from that locality. Since then I have seen a considerable number of Motmots from that country, and, as they all present similar appearances, I think myself justified in elevating them to specific rank. The dimensions are smaller than in the *brasiliensis*, the black space on the head much more confined, the thalassine front being much broader and extending nearly to the vertex, leaving only a small black patch between it and the bright blue behind. And the castaneous patch behind the head is wanting, there being, however, in some specimens a brownish-bronze tinge on the upper back.

As a general rule the species from the mountain ranges of New Grenada are distinct from those of the eastern littoral of South America, and I think it seems likely that this Motmot does not form an exception to this rule.

### 4. MOMOTUS NATTERERI, sp. nov.

*Prionites brasiliensis*, Lafr. et d'Orb. Syn. Av. in Mag. de Zool. 1838, p. 34?

*Supra pure viridis, subtus fulvo tinctus, ventre medio et tectricibus subalaribus pure pallide rufescenti-ochraceis: pileo medio et lateribus capitis nigris: pileo antice thalassino, postice cæruleo circumcincto, his pennis cæruleis thalassino mixtis, striga pectorali parva, fere omnino cyanea, medialiter nigra.*

Long. tota 17·0, alæ 5·5, caudæ 9·0, rostri a fronte 1·4, a rictu 1·9, tarsi 1·1.

*Hab.* Yungas in Bolivia (d'Orb.); Goyaz, Brazil (Natterer).

*Mus.* Paris., Ac. Phil., Viudobicensi et P. L. S.

I have one Bolivian specimen, of what would at first appear to be

*M. brasiliensis*, and have seen others. They closely resemble the Cayenne bird certainly, but seem to merit separation as much as its four or five other allies, which are now generally admitted as species. My Bolivian bird is nearly equal in size to the *brasiliensis*; but the bill is not quite so thick, and narrower and more compressed, and the wings are rather shorter. The plumage above is pure green up to the nape, presenting no tinge of rufous, but a slight bronzy gloss on the neck; below there is a strong rufous cast, the belly and under wing-coverts being nearly pure pale buff. The head is coloured nearly as *brasiliensis*, but the blue feathers behind are mixed with a little thalassine.

A Motmot in the Vienna Museum, which I refer to this same species, was obtained by Natterer in the neighbourhood of Goyaz in Brazil, and I therefore propose to distinguish this bird by the title of *M. Nattereri*. There are also examples of this species in the collections of the Academy of Natural Sciences of Philadelphia and of Mr. Gould.

#### 5. MOMOTUS SUBRUFESCENS.

*Momotus subrufescens*, Sclater, Rev. et Mag. de Zool. 1853, p. 489.

*Supra viridis rufescente tinctus, subtus cinnamomeo-rufescens: pileo medio cum capitis lateribus et macula pectorali nigris; pileo undique thalassino cincto, sed his pennis thalassinis postice cæruleo terminatis.*

Long. tota 16·0, alæ 4·8, caudæ 9·5, rostri a fronte 1·2, a rictu 1·7.

*Hab.* Santa Martha (*Verreaux*); Cartagena (*Mus. Berol.*).

*Mus.* Brit., Ac. Phil. et P. L. S.

I first described this apparently distinct species of Motmot from some specimens in MM. Verreaux's collection. It approaches nearest to *M. bahamensis*, but is not nearly so dark below as that bird; and has the upper back strongly tinged with rufous, which passes off as we descend towards the rump, whereas the upper surface of the other is nearly pure green. There are specimens of a Motmot which I refer to this species in the Berlin and British Museums, and the collections of Sir William Jardine and Mr. Gould.

#### 6. MOMOTUS BAHAMENSIS.

*Prionites bahamensis*, Sw. An. in Men. p. 332; Bp. Consp. p. 68; Jard. & Selby, Ill. Orn. n. s. pl. 45; Bp. Consp. Vol. Anisodact. p. 8.

*Momotus bahamensis*, Gray, Gen. p. 68; List of Sp. ii. 1. p. 39.

*Clare viridis, subtus suturate rufo-castaneus: pileo lateribus capitis et macula pectorali nigris: pileo undique thalassino cincto; occipitis penarum apicibus cæruleis.*

Long. tota 16·0, alæ 5·5, caudæ 9·0, rostri a fronte 1·4, a rictu 1·85.

*Hab.* Bahamas (*Sw.*)?; Tobago (*Kirk.*); Trinidad.

*Mus.* P. L. S.

I am much inclined to doubt whether this Motmot is really found in the Bahamas. It is common in Tobago and Trinidad. It is easily distinguishable from its affines by the deep uniform chestnut colouring of the lower surface.

#### 7. MOMOTUS LESSONI.

*Momotus Lessoni*, Less. R. Z. 1842, p. 174; Des Murs, Icon. Orn. pl. 62; Less. Desc. d. Mamm. et Ois. p. 266; Sclater, P. Z. S. 1856, p. 285.

*Prionites Lessoni*, Bp. Consp. p. 165.

*Clare viridis, gula cyanescente, pectore paululum rufescente; pileo, lateribus capitibus et macula pectorali nigris: pileo undique cyaneo, his plumis cyaneis apud nucham cæruleo præpilatis, et postice item nigro marginato.*

Long. tota 16·0, alæ 5·5, caudæ 8·5, rostri a fronte 1·45, a rictu 2·0.

*Hab.* Nicaragua, Realejo (*Less.*); South Mexico, Xacatepec (*Deppe in Mus. Berol.*); vicinity of Cordova (*Sallé*).

*Mus.* Paris., P. L. S.

This fine large green northern representative of *M. brasiliensis* may be recognized from its congeners by having the blue hind-border to the cap edged with black towards the nape. This is also the case in *M. æquatorialis*, but I have already mentioned its differences from that species.

#### 8. MOMOTUS CÆRULEICEPS.

*Momotus cæruleiceps*, Gould, P. Z. S. 1836, p. 18; Gray, Gen. p. 68; Less. Desc. d. Mamm. et Ois. p. 265.

*Prionites cæruleiceps*, Bp. Consp. p. 165, et Consp. Vol. Anisodact. p. 8.

*Prionites cæruleocephalus*, Jard. & Selby, Ill. Orn. n. s. pl. 42.

*Momotus subhutu*, Less. Desc. Mamm. et Ois. p. 265.

*Luride viridis: capitibus lateribus et striga parva pectorali nigris: pileo viridescenti-cæruleo; fronte et superciliis clarioribus; occipitis pennis nigro mixtis.*

Long. tota 16·0, alæ 5·5, caudæ 8·5, rostri a fronte 1·15, a rictu 1·8.

*Hab.* Southern Mexico, Xalapa (*Mus. Berol. et Heineano*); Tamaulipas (*Mus. Jard.*); Vera Cruz (*Sallé*).

Lesson's *M. subhutu*, described in the little summary of this group given in his 'Description des Mammifères et Oiseaux,' is attached by Prince Bonaparte to his *M. psalurus* with a mark of doubt. But on attentively considering Lesson's description, I think there can be little doubt this is the bird really intended by it.

#### 9. MOMOTUS MEXICANUS.

*Momotus mexicanus*, Sw. Phil. Mag. 1827, p. 442; Zool. Ill. n. s.

pl. 81; Gray, Gen. p. 68; List of Sp. in B.M. ii. pt. 1, p. 40; Less. Descr. &c. p. 266; Bp. Consp. Vol. Anisod. p. 7.

*Prionites mexicanus*, Bp. Consp. p. 165.

*Momotus Martii*, Jard. & Selby, Ill. Orn. pl. 23 (err.).

*Viridis, supra rufescentior, subtus valde albescentior: pileo et cervice supra brunneo-rufis: striga pone oculos et macula pectorali nigris: macula suboculari cyanea.*

Long. tota 12·5, alæ 4·4, caudæ 6·5, rostri a fronte 1·15, a rictu 1·5.

*Hab.* Southern Mexico, Golan (*Delattre*); Quicaltan (*Deppe in Mus. Berol.*); Lucappa (*Bates in Mus. Derb.*).

#### 10. MOMOTUS CASTANEICEPS.

*Prionites castaneiceps*, Gould, P. Z. S. 1854, p. 154.

*Similis M. mexicano sed major, pileo saturatiore castaneo et macula suboculari subobsoleta alba nec cyanea.*

*Hab.* Guatemala, Coban (*Delattre*).

*Mus.* Derbiano, Ac. Phil. et Bremensi.

Besides the specimens noticed by Mr. Gould, I have seen examples of this species in the Bremen Museum also from Guatemala, and in the collection of the Academy of Natural Sciences of Philadelphia. It appears to be probably different from the preceding.

#### 11. MOMOTUS SEMIRUFUS.

*Prionites Martii*, Spix, Av. Bras. i. p. 64. pl. 60?; Tsch. F. P. p. 252 certè.

*Momotus semirufus*, Sclater, Rev. Zool. 1853, p. 489.

*Baryphonus semirufus*, Bp. Consp. Vol. Anisodact. p. 8.

*Viridis; capite colloque supero et corpore infra ad medium ventrem castaneo-rufis, lateribus capitis et macula pectorali nigris: ventre imo crissoque cum alis extus paululum cærulescentibus.*

Long. tota 19·5, alæ 7·3, caudæ 11·5, rostri a fronte 1·75.

*Hab.* New Grenada, Santa Martha and Bogota: Rio Napo, Ecuador (*Jameson*); Upper Peruvian Amazon, Rio Javarri (*Cast. et Dev.*).

*Mus.* Brit., Paris.

This fine large Motmot I first saw in 1853 in the hands of MM. Verreaux, who had then lately received two specimens of it from their collector at S. Martha. Shortly afterwards in looking through the birds of this family in the collection of the Jardin des Plantes I observed three individuals of the same species, one of which was labelled 'Bogota,' and another as having been collected by MM. Castelnau and Deville on the Rio Javarri. I at that time considered the bird as without doubt unnamed, and described it accordingly in Guérin's 'Revue et Magazin de Zoologie.' But about a year afterwards, in looking through Tschudi's types at Neuchatel, I was surprised to find a specimen of this bird labeled '*P. Martii*, Spix,' as that name has been generally thought to apply to the *M. platyrhyn-*

*chus* of Leadbeater—belonging to the genus *Prionirhynchus*. Now upon referring again to Spix's figure and description, I think that he is as likely to have intended one bird as the other for his *P. Martii*, and it will be difficult to pronounce decisively which of the two ought to bear that name, until the type in the Munich Museum, if still existing, be examined, and the fact ascertained whether it is a specimen of *Momotus semirufus* or *Prionirhynchus platyrhynchus*.

Div. b. *Caudæ rectricibus decem, et harum mediis non spatulatis.*

12. MOMOTUS CYANOASTER.

*El tutu*, Azara, Pax. i. p. 243.

*Baryphonus cyanogaster*, Vieill. N. D. d'N. H. xxi. 317, et Enc. Méth. p. 898.

*Prionites ruficapillus*, Hartl. Ind. Azar. p. 4; Max. Beitr. iii. 1257; Licht. Verz. p. 21; Tsch. F. P. p. 251.

*Baryphonus ruficapillus*, Vieill. Gal. pl. 190; Bp. Consp. Vol. Anisodact. p. 8.

*Prionites tutu*, Ranz. Elem. di Zool. iii. pt. 3. p. 157.

*Momotus levaillantii*, Less. Man. d'Orn. ii. 104; Gray, Gen. p. 68; List of Sp. in B.M. ii. pt. 1. p. 39; Less. Descr. d. Mamm. et Ois. p. 265.

*Prionites levaillanti*, Bp. Consp. p. 163.

*Le Motmot oranroux*, Levaill. Prom. Supp. pl. B.

*Viridis: capitis lateribus et macula duplici pectoris nigris: pileo toto et fascia lata ventrali castaneis: ventre imo cærulescente.*

Long. tota 16·5, alæ 5·5, caudæ 9·0, rostri a fronte 1·4, a rictu 2·0.

*Hab.* Paraguay (*Azara*); South-eastern Brazil (*P. Max.*); Eastern Peru (*Tsch.*).

The Prince Maximilian found this Motmot singly or in pairs in the woods of the south-eastern provinces of Brazil. He says it was generally observed sitting quietly upon a branch like a *Bucco*, and allowing the hunter to approach without fear. Especially in the morning and evening it emits its prolonged, soft, flute-like note, resembling that of our European Hoopoe. Its food consists of insects.

This bird, which is well figured by Le Vaillant in the Supplement to his 'Promerops, &c.,' pl. B, is sometimes called *ruficapillus*; but that name is more strictly applicable to the species represented by the same author in his 'Oiseaux de Paradis,' pl. 39, and of which some account will be found hereafter.

Although I have never yet had an opportunity of examining Paraguay specimens of this species, there seems little doubt that Azara's "*Tutu*" is referable to it, and we must therefore employ Vieillot's term "*cyanogaster*" as its first-given specific appellation, although in most examples the blue tinge on the belly is but slightly apparent.

## Genus II. HYLOMANES.

*Hylomanes*, Licht. Abh. Ac. Berol. 1838, p. 449.

*Rostrum debilius et minus incurvum, non compressum sed dilatatum, marginibus tenuissime serratis: cauda brevis, reatricibus decem et harum mediis non spatulatis.*

## 1. HYLOMANES MOMOTULA.

*Hylomanes momotula*, Licht. Abh. Ac. Berol. 1838, p. 449. pl. 4; Bp. Consp. p. 164.

*Momotus momotula*, Gray's Gen. p. 68. pl. 24; List of Sp. in B. M. ii. 1. p. 40.

*Viridis: pileo rufo: superciliis cyaneis: regione auriculari nigra: subtus albescens, viridi tincta.*

Long. tota 6·0, alæ 3·0, caudæ 2·25, rostri a fronte ·9.

*Hab.* Mexico, Valle Real (Licht.); Jalapa (Sallé).

*Mus.* Brit., Berolin., Bruxelliano.

## 2. HYLOMANES GULARIS.

*Prionites gularis*, Lafr. R. Z. 1840, p. 130; Bp. Consp. p. 165, et Consp. Vol. Zygodact. p. 8.

*Momotus gularis*, Gray's Gen. i. p. 68; Strickl. Cont. Orn. 1848, p. 33. pl. 17; Less. Descr. Mamm. et Ois. p. 266.

*Viridis; gula et ventre imo cyaneis: regione ophthalmica rufescente: macula auriculari utrinque et pectoris duplici nigris: cauda subtus fusca, supra apice cærulescente.*

Long. tota 10·0, alæ 4·0, caudæ 5·5, rostri a fronte 1·1.

*Hab.* Guatemala (Lafr. et Strickl.).

*Mus.* Paris.

This bird seems to me to be most naturally arranged as a second species of *Momotula*, though, as Mr. Strickland has observed, it partakes of the characters of the other genera. Mr. Strickland's examples were, I believe, from the neighbourhood of the city of Guatemala.

## Genus III. PRIONIRHYNCHUS.

*Crypticus*, Sw. Class. B. ii. p. 338 (1837).

*Rostrum elongatum, dilatatum, carinatum, incurvum, marginibus tenuissime serratis: caudæ reatricibus decem, harum mediis elongatis et spatulatis.*

## 1. PRIONIRHYNCHUS PLATYRHYNCHUS, Leadbeater.

*Momotus platyrhynchus*, Leadb. Linn. Trans. xvi. p. 92; Jard. & Selby, Ill. Orn. pl. 106; Gray's Gen. p. 68. sp. 8.

*Prionites Martii*, Spix, Av. Bras. i. p. 64. pl. 60?

*Crypticus Martii*, Bp. P. Z. S. 1837, p. 119, *certè*; Consp. p. 165; Less. Descr. d. Mamm. et Ois. p. 267.

*Viridis, capite et cervice supra et corpore infra ad medium pectus castaneis: cauda cærulescenti-viridi: striga lata per oculos ad aures et maculis duabus in pectore nigris.*

Long. tota 14·0, alæ 4·9, caudæ 8·2.

*Hab.* Eastern Peru, wood region (*Tsch.*); Sarayaçu (*Cast. & Dev.*); Bolivia.

This bird was first well described by Mr. Leadbeater before the Linnean Society. I have already stated that I think it possible that Prince Bonaparte and subsequent naturalists have been in error in considering Spix's *Prionites Martii* as intended for this bird, and I have therefore thought it safer to employ for it Leadbeater's name *platyrhynchus*.

I have made the new generic term *Prionirhynchus* for this form in the place of *Crypticus*, because the latter term is in use for a genus of Coleopterous insects, founded by Latreille in 1817.

## 2. PRIONIRHYNCHUS CARINATUS. (Pl. CXXVIII.)

*Prionites carinatus*, Du Bus, Bull. Ac. Brux. xiv. pt. 2. p. 108, et R. Z. 1848, p. 249.

*Crypticus carinatus*, Bp. Consp. p. 165.

*Supra olivascenti-viridis: fronte juxta marginem maxillæ rufescente: superciliis cyaneis: tænia a naribus infra oculos ad regionem paroticam ducta et pennulis quibusdam pectoris nigris: infra virescenti-rufus, mento viridi-cærulescente: remigibus fusco-nigris, pogonio externo viridi-cærulescente: cauda supra viridi-cærulescente: reatricibus duabus intermediis spatulatis et nigro terminatis: rostro et pedibus nigris, illius apice cornea.*

Long. tota 14·0 poll.

*Hab.* Guatimala (*Du Bus*).

The Vicomte Du Bus has kindly sent me a beautiful figure of this Motmot, from which the accompanying plate has been reduced. I have never seen this bird, and I believe his specimen is the only one known.

## Genus IV. EUMOMOTA, gen. nov.

*Rostrum Prionirhynchi sed minus carinatum et dilatatum, paulum incurvum, mandibularum marginum media solum parte serrata: caudæ reatricibus decem, harum quinque utrinque extimæ graduatæ, ad apicem quadriformes; mediæ duæ ceteris duplo longiores, magna parte denudatæ et spatulis terminatæ.*

### 1. EUMOMOTA SUPERCILIARIS.

*Crypticus superciliaris*, Sandbach, MS

*Prionites (Crypticus) superciliaris*, Jard. & Selby, Ill. Orn. n. s. pl. 18.

*Momotus superciliaris*, Gray, Gen. p. 68. sp. 10; List of Sp. in B. M. ii. 1. p. 40.

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*Crypticus superciliosus*, Sw. An. in Men. p. 267; Less. Desc. d. Mamm. et Ois. p. 267.

*Crypticus apiaster*, Less. R. Z. 1842, p. 174.

*Momotus yucatanensis*, Cabot, Pr. N. H. Soc. Boston, iv. 467; Gray, Gen. p. 68. sp. 13.

*Prionites yucatanensis*, Bp. Consp. p. 165.

*Olivaceus*; dorso medio, macula post-oculari et ventre imo castaneis: superciliis latis et maculis subocularibus læte glaucocyaneis: vitta per oculos utrinque transeunte nigra: vitta gulari longitudinali nigra, utrinque cyaneo marginata: alis nigris extus cyaneo marginatis: rectricibus subtus nigricantibus, supra cærulescentibus, nigro terminatis: duarum mediarum rachide nuda longissima, apice spatulata.

Long. tota 14·0, alæ 4·5, caudæ 8·0.

Hab. Central America, Yucatan (Cabot); Bay of Campeachy (M. B.); Guatemala and Honduras.

This beautiful bird, with the peculiar incurved bill—the serration of which is confined to the middle of the mandibles—and comparatively short tail, with the two medial rectrices far projecting and denuded to a much greater extent than in other Motmots, seems to present characters quite as distinctive as *Hylomanes* or *Prionirhynchus*, and I have accordingly proposed for it the new generic name *Eumomota*. Prince Bonaparte has remarked (Notes Orn. p. 89) that there seems to be two varieties of this bird, one from the western coast of Central America more red, the other from the eastern coast more blue.

The preceding account embraces all the species of Motmots with which I am acquainted. There are a few others mentioned by authors, concerning which I subjoin the following remarks:—

1. *Le motmot dombé*, Levaill. Ois. de Par. i. p. 113. pl. 39.

*Baryphonus ruficapillus*, Vieill. Nouv. Dict. d'H. N. xxi. p. 315.

*Prionites dombeyanus*, Ranz. Elem. di Zool. iii. pt. 3. p. 158.

*Momotus dombeyi*, Less. Tr. d'Orn. p. 251; Less. Man. d'Orn. p. 103.

*Momotus rubricapillus*, Steph. Zool. xiv. p. 84.

*Prionites dombeyi*, Sw. Class. ii. p. 338.

*Momotus ruficapillus*, Gray's Gen. p. 68. sp. 4.

*Prionites ruficapillus*, Bp.'s Consp. p. 165. sp. 4.

*Momotus tutu*, Less. Descr. d. Mamm. et Ois. p. 265.

Le Vaillant, upon the authority of whose figure some systematists have formed and others adopted the several scientific names above given, writes as follows concerning this Motmot:—"Whatever may be the case with the second species of Motmot of the older writers, which all nomenclatists have spoken of, but none have seen, here is one well-characterized, and differing from the first in that it has all the top of the head red, and that it has not part of the tail-feathers ebarbed, nor a black spot on the stomach. All is otherwise quite similar in colour between the two species, except that the green of

the back and wings and the blue of the middle tail-feathers and primaries are more pure in this species than in the other. The size also of the two birds is nearly the same : in the tail there is this difference, that the four middle feathers of the present Motmot are of equal length. We owe this second species of Motmot to Dombé, a zealous naturalist. . . . The *Houtou* is found in Guiana; the *Motmot Dombé* inhabits the forests in the environs of Lima. The traveller I have named assures me that it is very common there, and that he had not remarked any difference between many individuals that he had seen of this species and the two he had brought back, of which one was deposited with many other beautiful birds of Peru in the cabinet of the king. It is a pity that this individual has been entirely destroyed by fumigations of sulphur and by insects; as to the other, we know not what has become of it."

Such is Le Vaillant's account. Supposing it to be accurate, the species appears distinct from any other known. But no such bird has been recognized by any other author, nor is to be found, as far as my experience goes, in any collection. As for its frequency in the vicinity of Lima, I am inclined to doubt the fact. Von Tschudi gives us accounts of three Motmots that inhabit the Cisandean wood-region of Peru, but says nothing of one occurring in the coast-region; nor do I believe that any species of the family occurs on the western side of the Andes. Had this bird been common about Lima he could hardly have missed it, collecting so much as he did in that quarter. I cannot help thinking therefore that Le Vaillant's figure and description are inaccurate, having been made after the "moths and fumigations" had operated upon the specimen, or perhaps from Dombé's recollections. In such case the *Motmot dombé* was probably the *Momotus cyanogaster*, which does occur in Eastern Peru, and has the medial rectrices whole.

2. "*Momotus psalurus*, Puch.;" Bp. Compt. Rend. 1854. xxxviii. p. 659, et Notes Orn. s. l. coll. Delattre, p. 88.

Prince Bonaparte, in his communication to the French Academy on the collections made by M. Delattre in Nicaragua, has given a short account of this species, which I subjoin:—"Les exemplaires rapportés de Nicaragua par M. Delattre sont intermédiaires entre *momotus* et *bahamensis* pour les couleurs comme pour la localité (!). La calotte noire est en effet moins étendue que dans le *P. bahamensis*, mais plus que dans *P. momotus* et entourée par la teinte aigue-marine même postérieurement, le bleu n'occupant que la pointe des longues plumes: les couvertures inférieures des ailes sont rousses ainsi que la ventre et les cuisses: les appendicules des penes de la queue sont beaucoup plus larges que dans les autres espèces: le coup d'œil exercé de M. Pucheran a distingué à cause de cela dans nos galeries ce beau Volucré, notre seconde espèce, sous le nom de *Pr. psalurus*."

I can make no other suggestion concerning this species than that it is probably the same as *M. lessoni*. Dr. Pucheran utterly disclaims the paternity of the name which Prince Bonaparte has thus attempted to affiliate on him.

3. *Momotus parvirostris* is a name mentioned by Prince Bonaparte in the same passage. He merely says it is "*encore intermédiaire,*" i. e. between *M. brasiliensis* and *psalurus* I suppose. The bird intended, I should judge from the locality, to be perhaps *M. subrufescens*.

4. *Momotus varius*, Briss. Orn. iv. p. 469 ; Gm. S. N. i. p. 357, is an old name founded on Ray's Yayauhquitoll (!), concerning which it is difficult to say much.

The annexed table will serve to give a general idea of the geographical distribution of this family as far as I have been able to gain information upon it.

### MOMOTIDARUM SCHEMA GEOGRAPHICUM.

	Southern Mexico.	Central America.	Littoral of New Grenada.	Interior of New Grenada.	Interior of Ecuador.	Eastern Peru.	Bolivia.	Paraguay.	S. E. Brazil.	Lower Amazon.	Guiana and Cayenne.	Trinidad.
<b>I. MOMOTUS.</b>												
1. <i>brasiliensis</i> .....	...	...	...	...	...	*	...	...	...	*	*	...
2. <i>æquatorialis</i> .....	...	...	...	...	...	...	...	...	...	...	...	...
3. <i>microstephanus</i> .....	...	...	...	*	...	...	...	...	...	...	...	...
4. <i>nattereri</i> .....	...	...	...	...	...	...	*	...	...	...	...	...
5. <i>subrufescens</i> .....	...	...	*	...	...	...	...	...	...	...	...	...
6. <i>bahamensis</i> .....	...	...	...	...	...	...	...	...	...	...	...	*
7. <i>lessoni</i> .....	*	*	...	...	...	...	...	...	...	...	...	...
8. <i>cæruleiceps</i> .....	*	...	...	...	...	...	...	...	...	...	...	...
9. <i>mexicanus</i> .....	*	...	...	...	...	...	...	...	...	...	...	...
10. <i>castaneiceps</i> .....	...	*	...	...	...	...	...	...	...	...	...	...
11. <i>semirufus</i> .....	...	...	...	*	*	*	*	*	*	...	...	...
12. <i>cyanogaster</i> .....	...	...	...	...	...	*	*	*	*	...	...	...
<b>II. HYLOMANES.</b>												
1. <i>momotula</i> .....	*	...	...	...	...	...	...	...	...	...	...	...
2. <i>gularis</i> .....	...	*	...	...	...	...	...	...	...	...	...	...
<b>III. PRIONIRHYNCHUS.</b>												
1. <i>platyrhynchus</i> .....	...	...	...	...	...	*	*	...	...	...	...	...
2. <i>carinatus</i> .....	...	*	...	...	...	...	...	...	...	...	...	...
<b>IV. EUMOMOTA.</b>												
1. <i>superciliaris</i> .....	...	*	...	...	...	...	...	...	...	...	...	...
	4	5	1	2	2	4	3	1	1	1	1	1